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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,663	06/28/2001	N. David Naegle	5181-56601	6969

7590

02/26/2004

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EXAMINER

HAVAN, THU THAO

ART UNIT

PAPER NUMBER

2672

3

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,663

Applicant(s)

NAEGLE ET AL.

Examiner

Thu-Thao Havan

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The Examiner accepts the drawings.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims **1-30** are rejected under 35 U.S.C. 102(e) as being unpatentable by Spiegel et al. (US patent no. 5,615,282).

Re claim 1, Spiegel discloses an adder tree for adding numbers (fig. 1—element 164) comprising one or more addition levels including a top addition level and a bottom addition level wherein a summation of numbers begins at top level and propagates through one or more addition levels wherein each of addition levels comprises one or more adder cells (fig. 20; col. 27, line 54 to col. 28, line 26), wherein each of adder cells is configured to receive a first input operand and a second input operand a first winner-take-all (WTA) bit and a second WTA bit and to generate a first output operand wherein the first output operand equals the first input operand if the first WTA bit is high wherein the first output operand equals to the second output operand if the second WTA bit is high (figs. 17 and 26-27), and wherein each of one or more adders at the top addition level

receives two of numbers as the corresponding first input operand and the second input operand (col., lines; fig. 44). In other words, Spiegel teaches color reproduction in graphic arts. He teaches adder tree unit comprises two adder trees handling the V stream and the C stream respectively. Each adder tree may be implemented similarly to the adder tree. In the C stream tree, all inputs to all four adders carry 9 bits. In the V stream tree, all inputs to the two adders of segment 1 carry 3 bits. The outputs of the two adders of segment 1 are 4 bits and the output of the adder of segment 2 is 5 bits. The output of the V stream adder tree (the output of the adder of the third segment) is also 5 bits.

Re claims **2-5, 12-13, 19, 21-22, and 24**, Spiegel discloses each adder cell is further configured to generate a WTA output bit which comprises the logical OR of the first WTA bit and the second WTA bit (figs 17 and 19). For example, if the current pixel is in the first column of the second row of the image, the multiplexer may channel data row 1 to the data streams corresponding to the first and second rows of the convolution window. Data rows 2 to 4 may be channeled to the data streams corresponding to rows 3-5 of the convolution window. Within each of the rows, the first three cells of the shift register are each filled with the color value of the first pixel of the row. The fourth and fifth cells are filled with the color value of the second and third pixels of the row.

Re claims **6-8**, Spiegel discloses the adder cell comprises an adder, a first multiplexor coupled to a first multiplexor coupled to a first input of the adder, a second multiplexor coupled to a second input of the adder wherein the first multiplexor receives a zero input and the first input operand and is controlled by the logical OR of the first

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WTA bit and first DV bit wherein the second multiplexor receives another zero input and the second input operand and is controlled by the logical OR of the second WTA bit and the second DV bit wherein the adder is configured to generate the first output operand (col. 41, line 53 to col. 42, line 18).

Re claims **9-10, 28, and 30**, Spiegel discloses buffer registers interposed between a first addition level and a second addition level of the adder tree to temporarily store output operands generated by adder cells of the first addition level prior to their presentation to the second addition level (col. 42, lines 19-46). In other words, Spiegel teaches a data storage for storing data having at least two dimensions, the data defining a sequence of rows, the sequence of rows defining, for each row, a position integer determining the position of the row within the sequence, the method including the steps of providing a predetermined number of storage apparatus, each individual one of the storage apparatus being operative to store a subsequence from among the sequence of rows, the difference between the position integers of adjacent rows in the subsequence being equal to the predetermined number.

Re claims **11, 15, 18, 20, 23, and 27**, the limitations of claims 11, 15, 18, 20, 23, and 27 are identical to claim 1 above. Therefore, claims 11, 15, 18, 20, 23, and 27 are treated the same as discussed with respect to claim 1 above.

Re claims **14, 16-17, 25-26**, Spiegel discloses plurality of numeric values are weighted sample components usable to form pixels for display on a display device (fig. 13).

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Re claim **29**, it is inherent that a computer system comprises a keyboard as an input device (col. 35, lines 13-25).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Blomgren, US patent no. 5,935,198

Deering et al., US patent no. 6,577,312

Bresler, US Patent No. 5,296,935

Schwartz, US Patent No. 5,539,842

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

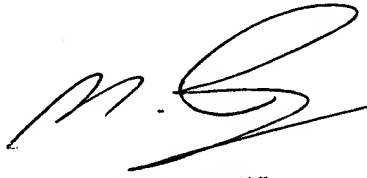
(703) 872-9314 (for Technology Center 2600 only)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan
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February 18, 2004



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600